I-405 CORRIDOR PROGRAM

ALTERNATIVES ANALYSIS PROCESS

Working Paper #9

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Alternatives Analysis Process Working Paper #9

The goal of the I-405 Corridor Program is to reach consensus on a preferred transportation strategy that can be implemented over the next 20 to 30 years. Reaching consensus will require a series of incremental decisions along the way: What is the problem or issue at hand? Is there more than one way to solve the problem? How will you measure the range of solutions against each other to select the best or preferred solution? These are the questions posed during what is known as an "alternatives analysis" process, and they also define the framework of federal NEPA (National Environmental Policy Act) and state SEPA (State Environmental Policy Act) analyses for approval of major capital projects. This paper describes several approaches to and tradeoffs among alternatives analyses, the Project Management Team's recommended alternatives analysis model, and methodology issues for further discussion prior to initiating alternatives analysis.

Alternative Analysis Models

The I-405 Corridor Study can use several process options to reach the study goal. Three possible process models are identified below. The key trade-off among the models is the ability to use pre-existing information to save time and resources versus the ability to define totally new alternatives from a clean slate.

Capitol Beltway Model: A major investment study was conducted for the Capitol Beltway around Washington, DC. The model used in this study (**Figure 1**) starts with a public process that identifies a broad, comprehensive set of options, then several levels of screening/evaluation efforts are used to reduce the number of alternatives.

This model is typical of many alternatives analysis processes used in MIS projects around the country. While it provides a good alternative analysis model for a "new" study, it does not provide an opportunity to use work completed to date. Efforts to define a "universe" of alternatives would comprise the first several steps of this model.

MCP Focused Model A: This model (**Figure 2**) builds upon a past process –in this case the I-405 Multi-Corridor Project, completed in 1998. The process begins with review of the 10 "pure" alternatives identified in that study. With a public process, those "pure" alternatives would be refined and packaged into a new set for detailed evaluation. Decision-makers would need to clarify if and how new alternatives are created, how much validity to grant the past study, and how alternatives will be evaluated.

MCP Focused Model B: This model (**Figure 3**) uses alternatives identified in a past study as a starting point. Using the Multi-Corridor Project (MCP) as an example, the I-405 Corridor Program's evaluation of alternatives would be limited to the three alternative packages of improvements identified by staffers at the close of the MCP. This approach would expedite the analysis process, but questions may remain as to public acceptance of the alternatives, and a process for accepting new alternatives that may emerge during the analysis.

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Recommended Model

The Project Team recommends that MCP Focused Model A become the prototype for the I-405 Corridor Program alternatives analysis. This model takes advantage of virtually all of the previous MCP technical work, but stops short of presuming the validity of the three alternative packages. A revised flowchart will be prepared showing how the previous MCP work fulfills the initial screening of ideas within the corridor, while still allowing for new ideas and alternatives to be introduced into the I-405 Corridor Program.

Getting to Specifics

The details of the alternative process within the selected decision model will affect the amount of information required for analysis and will influence whether it can be completed on time and within budget. Accordingly, the first steps associated with initiating the recommended alternatives analysis model will define the following:

Statement of purpose and need – a clear summary of the goals and objectives of the Corridor Program, which defines the parameters and intent of the analysis. This Statement will also guide the NEPA and SEPA environmental review.

Who is the "public" for this Program, and how they will be involved in generating alternatives - Should the public process focus on those MCP alternatives as the starting point and refine those with their input? (Note: the recommended Citizen Committee would be focussed on alternatives development)

Plan for clearly communicating the alternatives to the general public.

Comprehensive alternative identification – have we documented all of the potential alternatives, including those considered in the Multi-Corridor Project?

How many alternatives should be analyzed in the EIS - It is possible that the public process will identify many alternatives that were not studied in the past. How many alternatives can we reasonably study, keeping in mind that we must evaluate the full range of feasible alternatives? (By combining options in one category with those in others, alternative packages can quickly mushroom to more than several dozen.)

How quickly the number of alternatives will be reduced to several "packages" that can be analyzed in detail.

How to sort "packages" of alternatives – alternatives may be grouped in several ways, for example, by level of investment, function, ownership, location, or transportation mode.

Getting Started

The initial decision for the Executive, Citizens' and Steering Committee will be selection of an alternatives analysis model. Following that decision, the Project Management Team will develop recommendations on these specific process issues. Direction from the Committees will initiate the alternatives analysis, which will integrate with the environmental review process and public involvement program to culminate in selection of a preferred strategy for the I-405 Corridor.

Possible strategies to address the existing and future problems (18 strategies are identified) Initial screening Group promising strategies Enhancement Recommended for detailed ITS enhancement Dropped strategies Package package study (Law enforcement (Operational and driver education) Improvements) Analyze TSM/TDM Test transit viability and Analyze highway/ arterial strategies determine areas of highest improvement strategies potential Second level evaluation Develop packages of alternatives Third level evaluation Select three (or four) packages Drop strategies/options Conduct environmental impact study **Estimate Cost** Select a preferred alternative

Figure 1: Capitol Beltway MIS Model

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Prepare Purpose and Needs Review the 10 "pure" alternatives developed in the MCP Generate new strategies/alternatives and combine with MCP alternatives Establish evaluation criteria Evaluate preliminary alternatives (First level) Drop alternatives for further Select actions to be consideration included in a preferred Refine preliminary alternatives (Transit emphasis, Freeway emphasis, Arterial emphasis) Combine alternatives into several packages Evaluate preliminary alternatives (Second level) Drop options/ alternatives Select three alternatives (and No-action) Conduct detailed environmental and technical analysis Select a preferred alternative

Figure 2: MCP Focused Model A

Start at the end of the MCP alternative development and evaluation (Staff recommendation in June 1997) I-405 Improvement package Arterial improvement Transit/ TDM (Building off the Express package improvement package Lane Concept) Identify I-405 improvement Identify arterial Identify transit / TDM projects improvements projects Generate possible new ideas Corridor alternative A Corridor alternative B Prepare an EIS Select a preferred corridor strategy Implementation

Figure 3: MCP Focused Model B